

TRANSACTIONS

OF THE

CHICAGO SURGICAL SOCIETY.

Joint Meeting with the Chicago Medical Society, held January 13, 1904.

The President, E. WYLLYS ANDREWS, in the Chair.

THE SURGICAL TREATMENT OF BRIGHT'S DISEASE.

DR. E. WYLLYS ANDREWS reported four cases, as follows: First, a man, thirty-two years of age, in moderate health otherwise, who had had for some years chronic interstitial nephritis. His urea averaged about $\frac{7}{10}$ per cent. There were hyaline casts. Double decapsulation was performed, following which there was a decided improvement in the total amount of urine as well as the total solids, and for a period of two or three weeks thereafter the urea went above 1 per cent., and remained between 1 and 2 per cent., while the casts were about the same. There was a small amount of albumen. The subsequent history was that the urea was again reduced. There were two or threescore careful urinalyses made of twenty-four hour specimens. The case was watched carefully, and to the best of his knowledge, nearly eighteen months after the operation, there was very little change for the better, nor yet was the patient much worse.

The second case was a young man, twenty-seven years of age, in comparatively good health. A patient of Dr. Johnson. Careful urinalyses showed that he had constantly averaged only $\frac{1}{2}$ per cent. urea; moderate amount of casts, and had chronic interstitial nephritis. Last May or June he decapsulated the kidneys, and, as in the first case, a very promising result appeared to be obtained at first. The urea line went up above 1 per cent., sometimes 2 per cent., and stood there for a little while; but the speaker was much disappointed to learn some months afterwards

that patient's urea had dropped again to the old per cent. The man had been six months before, and six or eight months after, the operation constantly on the strictest diet. While the patient reported himself as robust and feeling well, as a matter of fact his urinary findings were about the same.

Case three was under the charge of Dr. Goodkind and Dr. Hunt, of Englewood. A child, nine years of age, had severe, well-advanced chronic parenchymatous nephritis. The patient had been watched for some years; the symptoms had slowly but progressively grown worse. Anasarca was extreme; his eyes, forehead, neck, and chest were markedly œdematous as well as the lower limbs. Albumen varied from $\frac{1}{2}$ to $2\frac{1}{2}$ per cent.; urine rather scanty, and the case was apparently a desperate one, although there was never any bad heart action, or there had never been any coma. The child's condition precluded general anæsthesia with ether or chloroform. Under spinal cocainization, however, he had no difficulty whatever in making the decapsulation. The operation was done in September. A slightly favorable influence was at first apparent; the albumen diminished in quantity, remaining at about 1 per cent.; casts remained numerous; urea was fairly good; there was never at any time the slightest improvement in the anasarca. Patient remained in the hospital three or four weeks, then went home. After the fourth week the albumen again increased in quantity. After five weeks the patient had the former amount of albumen and, if anything, a smaller quantity of urine. He was dropsical and could hardly be moved. He considered it a case not improved by the method.

In case four the operation was done two months ago. It was a mixed case of intermittent hydronephrosis and unilateral nephritis. There was relief from all of the kidney symptoms by combined nephropexy and complete decortication of one kidney. Formerly, the urine was frequently full of blood, with a good many casts in the urine. There was intermittent distention and pain, and albuminuria, all of which symptoms had been entirely relieved; but he should say that it was likely the nephropexy, and not the decortication, that did the work.

DR. L. L. McARTHUR reported the following case of double decapsulation of kidney in a woman aged twenty-five years.

During an attack of pleurisy in August, 1901, she was found

to be suffering from nephritis. Ever since she has been under rigid medical care by Dr. Favill, and has had full benefit of diet, hygiene, and change of climate. She was referred to Dr. L. L. McArthur, for surgical treatment, in September, 1902, complaining of pain in back of head, œdema about eyes, ankles, and hands, infrequent urination (at times but once in two days), loss of appetite, strength, and weight, and attacks of drowsiness.

She had œdema of face about eyes of moderate degree; also about ankles and hands. Some pallor and "looked" weak and sick. No abnormal retinal findings. Condition of urine, color, straw; reaction, acid; sp. gr. 1007-1014; sediment, small amount; amount in twenty-four hours, 750-1700 cubic centimetres. (Amount due to large amount of water ingested; average, 1080. Much less (twenty ounces) before water was crowded;) total solids, 16.3 to 26.7; urea, 1 to 2.4 per cent.; albumen, .1 to 1.2 per cent.; sugar, 0; pus, few to much; blood 0 to few; cells, many epithelial; crystals, few calcium oxalate, urates; casts, few granular, few hyaline. (Only one specimen had none.)

September 29, 1902. Decapsulation of right kidney was done through an oblique lumbar incision. The capsule was somewhat adherent and the kidney slightly contracted. Capsule divided transversely, and then the lower and upper poles were respectively delivered, so that the whole capsule was placed anterior and internal to the kidney, and acted as a shelf upon which the kidney rested. The lower half capsule was stitched to fascia of transversalis at edge of wound by three catgut sutures. Temporary small drainage tube down to kidney. Recovery from operation was uneventful.

Segregation after first operation showed:

1. Amount of urine always more (one exception) from right kidney.
2. Urea, in three analyses, more from right side; in two analyses same amount from both sides; in two analyses less than in left side.
3. Albumen, in four analyses much more from left kidney; in two analyses same from both sides.
4. Casts, in one analysis no casts from right, few granular from left; in one analysis no casts from either side; in one analysis few granular right, few granular left; no hyaline right, few hyaline left; in one analysis one granular right, few granular left; one pus right, casts left.

General condition after right kidney had been operated upon: Decreased pain; no œdema; larger amount of urine; appetite still poor; some increase in strength.

Urine analyses before first operation compared with analysis after both kidneys had been decorticated.

<i>Before (Nine Analyses).</i>	<i>After (Ten Analyses).</i>
Specific gravity, 1007 to 1014.	Average, 1011.
* Amount in twenty-four hours, average, 1080 cubic centimetres.	Average, 1187 (1320 to 1800 last six months).
Total solids, 16.31 to 26.7 grammes.	Risen to 36 grammes last six months.
Urea, average, 1.45 per cent.	Average, 1.42 per cent.
Albumen, average, .4 per cent.	Whole average, 1.6 grammes; but when not including two examinations in February, which were 3.2 and 4.0, average was 1.02 grammes.
Sugar, 0.	0.
Pus, few to much.	Very few.
Blood, 0 to few.	Few to 0.
Cells, many epithelial.	Still many, at times few.
Crystals, 0 to few oxalate.	Amorphous few.
Casts, always some granular, usually few. Few or considerable hyaline.	Have diminished from few granules and many hyaline to 1 granule and 4 hyaline in three specimens during last six months.

January 1, 1903. The left kidney was decorticated at the urgent request of patient. Same technique. Appearance of kidney negative. Left hospital, March 5, 1903.

Comparative analysis of symptoms:

<i>Before Operation.</i>	<i>To-day.</i>
Pain in back and head at times severe.	No pain.
œdema of face and eyes, ankles and hands.	No œdema. (Rarely slight above eyes.)
Loss of weight.	Some gain in weight.
Great loss of strength.	Great gain in strength.
At times would urinate but once a day or day and a half; total 20 ounces or less.	Urinate five or six times during day, 60 ounces last twenty-four hours.

* Much less before entering hospital, where liquids were abundantly crowded.

<i>Before Operation.</i>	<i>To-day.</i>
Drowsiness at times marked.	No drowsiness.
Very tired upon the least exertion.	Exercises freely and feels "perfectly well."
Appetite very poor.	Appetite good. (Still on a diet of no meats.)
	"I am perfectly well now, and wish to go back to my work."

NOTE.—Cardiovascular changes as to blood-pressure, etc., not accurately enough noted to draw conclusions.

Final Conclusions applying to this Case.—(1) General condition much improved since operative interference. The element of time and two periods of absolute rest in bed for two weeks each must be considered here as possible causative factors; while on the other hand, be it noted, the patient for over a year before operations was under excellent medical care and given full benefit of diet, hygiene, and change of climate.

(2) Distinct improvement in the quality and quantity of the urine secreted from the kidney first operated upon as compared with the unoperated kidney.

(3) Improvement in quality and quantity of urine from both kidneys since the operation.

DR. A. J. OCISNER said we must look upon cases of nephritis as forming two distinct classes which had nothing to do with each other, so far as the disease itself was concerned, with the exception of certain symptoms. In the one class we had healthy kidneys, one of which had been injured mechanically, and this injury having been corrected by fixation and decapsulation, the kidney itself contained the elements which were necessary for its recovery. This class was discussed by Edebohls in his first paper.

In the other class, with systemic cause or causes, the conditions were entirely different. The element of tension might depend upon a further condition which was not mentioned, namely, œdema of the kidney. Tension in these kidneys was increased to a great extent in advanced cases by the œdematous condition of the kidney itself, and after relieving tension there was at once a flow of œdematous fluid precisely the same as was found in cutting through the remaining œdematous tissues. Having relieved the œdema, it was easy to imagine that the kidney tissues would be relieved of a certain burden, and the tissues which were prac-

tically inactive before would become active again, in a measure, for a short period. But these kidneys did not possess the conditions which were necessary for permanent recovery.

He had operated on a large number of movable kidneys in which there had been an injury due to displacement, interference with the circulation and traumatism, which accompanied this condition in which he removed a portion of the capsule for the purpose of securing proper fixation. He believed that these kidneys need not be considered, because the results, so far as nephritis was concerned, were simply incidental. The patient would live probably nearly as long, if not quite as long, with the use of one good kidney, the injury to the movable kidney being of slight importance.

As regards patients suffering from advanced nephritis, he had operated on seven cases, all but one of which seemed hopeless. All but one of these had well-marked albuminuric retinitis. One of these was a man, fifty-one years of age, an alcoholic, with a tremendous general œdema, and having all of the symptoms of advanced interstitial nephritis. He operated upon him August 3, 1903. Patient had been comatose a portion of the time for several days. He had been under careful medical treatment during a period of six months. The six weeks before the operation were spent under observation and treatment in the hospital. The œdema disappeared completely and the patient improved to a marked degree. The amount of urine increased from an average of fourteen ounces in twenty-four hours to over sixty ounces. The cause of his nephritis was chronic alcoholism. Patient was still alive; he had resumed his habits as regards the use of alcohol, and was now suffering from a mild form of mania. He thought he would die soon. There was one case which corresponded closely to the one Dr. McArthur had described, the patient being only thirty-six years of age. She was operated on June 26, 1903, and at the present time patient claimed to be perfectly well. Four out of seven had died within one year after the operation, one of them within two weeks. One improved materially after operation upon one kidney, and expressed a desire to have the other kidney operated on; but he died in seven days from acute uræmia. Three were alive, one of them having been operated on only a few weeks ago.

DR. ALEXANDER HUGH FERGUSON said that in the milder

cases of nephritis the results of decapsulation were beautiful, both immediate and permanent.

Surgeons, however, had been forced to operate on many severe cases since this surgical procedure had been devised. Cases that were moribund were bound to die inside of a few days or weeks; they slipped away from the internists, who could not do anything more for them. Decapsulation, he thought, had more effect upon patients than internal medication. However, he would say that the limitations of decortication of the kidney were not yet clearly defined. At the present time, with an experience of over twenty operated cases, he would put down the indications for surgical intervention in Bright's disease as follows: Independently of this, he would decapsulate all cases of floating kidney, and suspend such a kidney from the peeled-off capsule. The reason for this being that in a number of cases that had been under observation for years there had been no kidney disturbance other than that the kidney might be movable, and after a time the kidney became painful and tender, with symptoms of Bright's disease, as indicated by the condition of the urine. He had made inquiries of thirteen different such cases he had on his books, extending over a period of years, and of this number that were operated upon for kidney disturbances since they had been his patients, all but three had undergone nephropexy, pointing out the fact that the kidney having once lost its moorings, interference with the circulation thereby produced a low form of inflammation in the kidney, which called for surgical treatment. He had years ago refused to operate upon cases of floating kidneys because there was Bright's disease as well. Now, it was an indication for operating. An indication would be for nephritis itself. The first of these would be acute Bright's disease of whatever form, where it stubbornly refused management, as in those cases attacked by Reginald Harrison for the relief of kidney tension. Although Harrison had operated on some of them under mistaken diagnoses, still the lesson was taught the profession that acute Bright's disease was amenable to surgical treatment. We might have the diffuse, interstitial, and parenchymatous forms of acute Bright's disease. One could not in a given case tell, without microscopic examination, how much was parenchymatous, how much was interstitial, and how much was diffuse. Cases of chronic interstitial nephritis, in which the kidneys were extremely painful and tender, though

small, were benefited for a time, at least, by decapsulation and puncture. It could not be said that peeling off of the capsule of the kidney was going to cure general arteriosclerosis, but it might affect the sclerosis in that kidney. Parenchymatous nephritis was a form, he thought at one time, which would receive no benefit by operation, but he was convinced to the contrary in properly selected cases. He mentioned three extreme cases showing the limitations of the operation.

Last June he was called to Wheaton, Illinois, to see a man, fifty-six years of age, who had been ill for twenty days. He went to Wisconsin on a business trip, took cold in driving through the country; his urine became bloody; he returned in three days, and placed himself under his physician. Several months before this illness the patient's urine was examined repeatedly at the Columbus Medical Laboratory without finding evidence of Bright's disease. It was also examined by a physician who had examined the man for life insurance. Dr. Rea examined his urine several times, and he could not find any evidence of Bright's disease. For six days before he had only passed eight ounces of urine. He had been perspiring profusely. He had œdema of the lungs, bloated face, was drowsy, and one would have to arouse him before he would answer questions. It was an extreme case, one which he thought ought not to be operated upon. He consented to explore one kidney under local anæsthesia. He used cocaine; explored the right kidney, and found, when he began to handle the kidney, it caused pain. A little chloroform was given the patient as an analgesic rather than for the purpose of putting him profoundly asleep. In peeling off the capsule, the first appearance of such a kidney was its dark-blue color, and blistered. The capsule was completely raised off over two-thirds of the kidney. There was bloody serum underneath. The capsule peeled off readily. The kidney itself was hard, mottled, and friable. This was a case, as shown by a microscopic examination of a portion of the kidney, of acute, diffuse, hæmorrhagic nephritis engrafted upon an old interstitial Bright's disease. If this case had been operated on early, he believed life would have been spared for some time. He died of pulmonary œdema in sixteen hours.

The next case was one of double decapsulation of the kidney, the operation having been performed November 23 last. Patient was a week in the hospital before the operation. He had ad-

vanced interstitial nephritis. This patient had marked headache, œdema of the face, arms, and legs. The urine, sp. gr. 1007, was loaded with granular and hyaline casts; albumen, 36 per cent.; urea, $\frac{3}{4}$ of 1 per cent., with pus coming from the bladder and prostate. He had coma two weeks before the operation, and he was unconscious for three or four hours. After the operation the clinical picture in this case was changed completely. Instead of being stupid, drowsy, bloated, œdematous, and a half-living man, he appeared to be wide awake, sprightly, and walked into the clinic, three weeks afterwards, with the record of his case under his arm to show himself. When the speaker saw the patient three weeks ago he was improving constitutionally. There was not much change in the urine, with the exception that there was less albumen; granular casts were present and were as abundant as before. The quantity of urine was somewhat less, but not sufficient to say much about it. The fundus of each eye was extremely congested before operation, so that he could not distinguish his relatives from the nurse. He could not see to read at all. In a few days vision had improved amazingly. He discarded his spectacles and could read readily and well. What the permanent benefit would be in this case he did not know.

Another patient had had Bright's disease. He had scarlet fever twelve years previously, and Bright's disease was only diagnosed by a physician about nine months ago. He told patient that his case was hopeless. Patient was passing very little urine. He had general œdema. A rapid operation was done, and two white kidneys about the size of an egg were found. In cutting into them they did not bleed; it was just like cutting into a piece of cheese. Nothing surgically could be done which would be of benefit in these cases of small white kidney.

He operated upon a woman on the 9th of September, 1897, who was referred to him by Dr. E. M. Brown. He saw her a month ago. He sent her to the hospital and had repeated examinations of her urine made. She secreted more urine now than normally, but there were no casts to be found in it. The case was one of interstitial nephritis, with double floating kidney. This case was interesting because the right floating kidney had been anchored before, but it did not relieve the pain. Decapsulation of the kidney and anchoring it by the capsule caused relief. The patient was healthier now than she had been for many years.

He mentioned the case of a man upon whom he operated for parenchymatous nephritis in August, 1902. The improvement in this case since operation had been very satisfactory. He had over 50 per cent. of albumen in the urine, which could not be reduced by changing climate and by medication and nursing; but double decapsulation reduced it to one-half of 1 per cent. What the remote result would be, he did not know.

Referring to the mortality, he said it was not fair to say that when a surgeon operated on a case of Bright's disease and decapsulated the kidney, if the patient lived for a month and then died, death was due to the operation. It was unfair to say that the mortality from decapsulation of the kidney was 100 per cent., 50 per cent., or even 15 per cent., because one should reckon from the operation *per se*. If a man should die afterwards from Bright's disease, he did not die from the operation. It should be simply stated that the operation did not cure him. The mortality to-day from renal decapsulation was in the neighborhood of 6 per cent. *per se*. As to how the improvement took place it was not known.

As to the formation of a new fibrous capsule, the speaker pointed out that we had two kinds of fibrous tissue produced by repair, one of which went on to cicatrization, with an increase in quantity, and the other behaved quite the reverse; as the patient became older the fibrous scar became less and less, until eventually it were hardly recognized. It is not yet proved whether the new fibrous capsule increases in bulk or not.

He was of the opinion that an anastomosis took place between the outside of the kidney and the newly-formed capsule. We had evidence of fibrous adhesions in other parts of the body becoming vascular, such as within the abdominal cavity and thorax. He had had one case with which he could demonstrate that. He had operated twice. The second time he opened the kidney and removed a section of the adherent new cortex of the kidney, and this was quite vascular. To prove this point would require a great deal of experimentation and observation.

The marked primary benefit he thought was due to the great determination of blood to the part, instituting a new order of things in chronic cases, and the relief of tension in acute ones. He believed, also, that puncturing or opening these kidneys, when they were considerably diseased, would prevent anuria. He had observed in the literature that one or two cases died from anuria.

If such a kidney were partly opened, the urine would escape on to the dressing, and it would prevent death from that cause. Relief of tension did not pertain so much to the chronic as it did to the acute cases.

DR. EMIL RIES said he was in a position to furnish information along the line of experimentation referred to by Dr. Ferguson, inasmuch as he (Ferguson) had mentioned the experiments of Albarran and his school as being unsatisfactory to the surgeon because they were performed on dogs, which did not have nephritis. He mentioned the case of a man, forty-four years of age, who had had hæmaturia. Patient had been treated for five weeks by medical men, and with the cystoscope it was determined that the blood came from the left kidney exclusively.

Remembering the excellent results obtained in cases of hæmaturia by numerous surgeons, first of all by Reginald Harrison and Israel, of Berlin, operation was advised. It was performed on the 8th of August, 1901. On the 11th the urine was clear, and remained so. The patient made a smooth recovery. In August of the same year patient had hæmaturia again (slight) for two months, and when admitted to the hospital it was considerable. Patient was pale, weak, and unable to work. Cystoscope again showed blood escaping from the left ureter and clear urine escaping from the right ureter, so that the presence of the right kidney was known. He advised patient to have the left kidney removed entirely, which was acceded to, and the organ was removed. The newly-formed capsule around the kidney was about as thick as one's little finger, and very firmly attached all around, so that it would have been difficult to remove the kidney with the capsule; but it was easy to detach the capsule from the kidney itself and remove the kidney. From the kidney removed over 600 sections were made. He had stained and examined every one of these sections, and among the 600 sections there was but one single anastomosis, and this anastomosis was near a strip of connective tissue which followed the path made by him in the first operation with his finger, which he inserted into the pelvis of the kidney. Even this was not a direct anastomosis of kidney tissue, but was a vessel in the scar tissue. In the rest of the sections examined there was not a single, solitary anastomosis. The 600 sections were taken from various parts of the kidney, and this experiment, if one wished to call it such, on the human being

proved conclusively that the theory of the *modus operandi* of this operation, to wit, that it was due to anastomoses forming, was incorrect. He wished to say, however, that the fact that the theory of the treatment was incorrect did not prove that the treatment was incorrect, or that the treatment was unsuccessful. It was not clearly known how mercury cured syphilis; nor how quinine cured malaria. Nevertheless, these are two generally used and successful methods of treatment. That the theory of the formation of anastomoses after renal decapsulation was wrong was not for the first time demonstrated on the human being in this case. A specimen of the same kind was demonstrated at the New Orleans meeting of the American Medical Association, and a report published in the Journal of the Association. In that case, too, no anastomoses were found.

The speaker had operated on five cases. Two did not live more than seven months. Both were advanced cases; in both there were findings in the fundus, hæmorrhages in the vitreous and retina. Two cases were decapsulated for hæmaturia; one in 1899, which was successful. The patient was alive and perfectly well to-day. He was over sixty years of age.

The second case was the one whose kidney tissue he had shown. He had operated on one woman with a floating kidney, with traces of albumen in the urine from time to time. There were occasionally hyaline casts. As he had to operate for floating kidney, he decapsulated the organ to a greater extent than he usually did in these cases, using the capsule for suspending the kidney. This woman was well. She was operated on a year and nine months ago. He saw her about six weeks ago, at which time she was in good health. There was no albumen in the urine at that time. But that did not prove very much, as the albumen had not been present constantly before the operation, either.

He was sceptical as to the results of this operation. Taking it altogether, including his two cases of hæmaturia, one of which was relieved for seven months, it confirmed what had been known for years. Operation did not improve the prognosis in those cases in which there was disturbance in the fundus. In cases of floating kidney, with the presence of albumen in the urine, improvement seemed to follow operation with decapsulation to a greater extent than without it; but as a treatment for chronic interstitial nephritis, he would never advise the operation. In the cases he had

operated upon he had not advised the operation either, except in hæmaturia cases. In the cases in which there were findings in the fundus, he would now advise against operation. His patients had heard of such operations, and had consulted him in regard to whether anything could be expected from it, and he told the patients that it was a matter of experiment. If the patient wanted that experiment tried, he was willing to undertake it. With such an understanding he was willing to operate. He did not believe at the time he operated on these cases, nor did he believe to-day, that any definite promise could be held out.

DR. ARTHUR DEAN BEVAN said that if it were not for the fact that Dr. Ferguson claimed to be the originator of renal decapsulation, he should call it the gynæcological treatment of Bright's disease. He had read Edebohl's first paper long before he heard of Ferguson's claim. Edebohl's operation was in line with the work of the gynæcologist who, in the ordinary cases which came to him complaining of trouble in the pelvis, backache, etc., employed as a routine treatment curettement of the uterus, sewing up of the lacerated cervix, and then sewing up the lacerated perineum. Finding, however, that many of the patients did not get well from this treatment he added to these measures fixation of the uterus as a routine. Even then many of the patients did not fully recover. He then added, as a routine, removal of the appendix at the time fixation of the uterus was undertaken, so that the house that Jack built read something like this: Curettement of the uterus; repair of the lacerated cervix; repair of the lacerated perineum; fixation of the uterus, and removal of the appendix. Finding that more of his patients recovered after this last procedure than before, but still there were some who were not benefited, he then added as a routine fixation of the right kidney. All of these operations were done at the same sitting, and all of the patients got well with the exception of those who had Bright's disease, and these he cured by fixation of the kidney and stripping of the capsule.

The speaker did not think renal decapsulation could be said to be the surgical treatment of Bright's disease, because, as a matter of fact, the great majority of surgeons throughout the United States and of the world had never accepted the operation as being a logical procedure. He ventured to say that nine-tenths of the surgeons who were members of the American Surgical

Association had not accepted renal decapsulation as a logical operative procedure. He did not think, therefore, it was strictly fair to call surgeons to account because this treatment was a failure. He thought credit should be given to Drs. Edebohls, Ferguson, and others for working out the problem. However, he thought the time had come when the profession could safely say that stripping off the capsule as a treatment for Bright's disease was a complete and perfect failure, and should receive the stamp of disapproval of scientific men. Out of this work had come some good, because it emphasized the importance of a class of cases in which another line of treatment was of value, namely, in cases of anuria, cases of essential kidney hæmaturia, in chronic pyelitis, with some nephritis, draining the kidney by a rapid nephrotomy was of distinct value. It had effected a great many cures, and would accomplish more. There were certain cases which came under the head of essential kidney hæmorrhage, and cases of pyelitis, with some nephritic involvement, which were difficult to differentiate sometimes by the most expert internist and diagnostician from Bright's disease, in which drainage of the pelvis of the kidney was of distinct value. But stripping off the capsule for the cure of Bright's disease was of very little, if any, value, and it now only remained for the profession to convince Ferguson, Edebohls, and others of this fact.